California Sportfishing Protection Alliance

"An Advocate for Fisheries, Habitat and Water Quality"

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Mr. Adam Laputz, Assistant Executive Officer
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VIA: Electronic Submission
Hardcopy if Requested

RE: Salt and Nitrate Management Plan for the Central Valley

Dear Messrs. Laputz and Meeks,

The California Sportfishing Protection Alliance (CSPA) has reviewed the proposed Salt and Nitrate Management Plan (SNMP) and submits the following comments. The Central Valley Regional Water Quality Control Board's (Regional Board) is tasked with water quality regulation by the California Water Code and the federal Clean Water Act, as delegated by US EPA. Regulatory practices have resulted in large areas of California's Central Valley groundwater and surface waters being polluted or degraded with nitrate and salt. Elevated nitrate and salt concentrations in portions of California's Central Valley impair, or threaten to impair water quality and the associated beneficial uses. The beneficial uses of irrigated agriculture, drinking and domestic water supply and industrial use are degraded or threatened.

The Regional Board, in order to address legacy and ongoing salt and nitrate accumulation, proposes the SNMP to achieve the following goals for salt and nitrate:

- Goal 1: Ensure a safe drinking water supply.
- Goal 2: Achieve balanced salt and nitrate loadings, where reasonable and feasible.
- Goal 3: Implement managed aquifer restoration program, where reasonable and feasible.

The Regional Board's SNMP Antidegradation Analysis, Proposed Policy Option (Central Valley Salt and Nitrate Management Plan Antidegradation Analysis, December 2016, pages 84 and 85), recommends and states, in part, that: –

- The Central Valley Water Board currently requires that dischargers that discharge nitrates comply with a water quality objective of 10 ug/L in the shallow aquifer underlying their discharge. The nitrate water quality objective of 10 mg/L correlates to the drinking water maximum contaminant level, which is designed to protect the beneficial use most

sensitive to nitrate impacts, which is the municipal and domestic drinking water (MUN) beneficial use.

- The Proposed Policy Option would significantly change how the Central Valley Water Board will determine compliance with the water quality objective during the time when the dischargers are implementing their Management Zone Implementation Plans – a time period which could span decades. Instead of determining compliance with applicable water quality objectives in shallow groundwater, the Board could authorize dischargers participating in a management zone to not cause groundwater to exceed 75% of the MCL, using a volume-weighted average in the upper portion of the groundwater aquifer. (Following implementation of the Implementation Plan, groundwater is expected to meet the drinking water MCL, or the highest quality water technically and economically achievable.) This method of evaluating compliance with the water quality objective will nonetheless ensure the reasonable protection of beneficial uses, as long as the dischargers take responsibility for ensuring that all groundwater users affected by nitrate dischargers in the management zone are made whole through the provision of replacement drinking water supplies.

- More importantly, the Groundwater Management Zone Policy has an overarching goal at achieving nitrate balance within the affected aquifer and restoring water quality within that aquifer where restoration is reasonable and feasible, resulting in protection of existing and probable future beneficial uses.

- In cases where balance and/or restoration is not reasonable or feasible, the Central Valley Water Board may need to evaluate the need to alter beneficial uses. However, such a consideration is a last resort, and only after it has been demonstrated that restoration of the basin in question to meeting water quality objectives is in fact not reasonable or feasible. Otherwise, all management zone proposals need to include long-term implementation plans for moving towards restoration of the aquifer in question. For example, a minimum requirement of a management zone implementation plan is identification of "short (≤ 20 years) and long-term (≥ 20 years) projects and/or planning activities that will be implemented within the management zone, and in particular within prioritized areas (if such areas are identified in the implementation plan) to make progress towards attaining each of the management goals established by the Central Valley SNMP."

- Further, any request for allocation of assimilative capacity from high quality waters (which, in this circumstance, would be defined as management zones where a volume-weighted average of water within the upper aquifer does not exceed 75% of the nitrate MCL) must be supported by a comprehensive antidegradation analysis for that zone, which must include demonstration that "there is sufficient assimilative capacity to ensure that the proposed discharge, together with discharges from participants to the same management zone, including discharges to recharge projects, will not cause the volume-weighted average water quality in the appropriate zone underlying the management zone to exceed the applicable Basin Plan objective(s) (upper zone for nitrate and production zone for salt).

The Salinity Management Strategy (SNMP Attachment A-3) involves a phased approach of study and implementation to control salt accumulation in the Central Valley:

- Phase I consists of developing a Prioritization and Optimization Study to further define the conceptual design of SSALTS into a feasibility study that identifies appropriate regional and sub-regional projects, including location, routing and implementation/operation of specific projects. Completion of the study is anticipated to take approximately 10-years, though the strategy recommends that the Executive Officer of the Central Valley Water Board be given the direct authority to extend this time frame if compelling reasons or adequate justification is provided for an extension.

- Once the Prioritization and Optimization Study is completed, Phase II of the Salinity Management Plan will be implemented. Implementation of Phase II, in whole or part, will occur as indicated in the Prioritization and Optimization Study, and after approval of any necessary Basin Plan amendments. Phase II will generally consist of environmental permitting, obtaining funding, and engineering and design, which are anticipated to take approximately 10 years.

- Phase III would consist of actual construction of the physical projects identified in the Prioritization and Optimization Study, in particular a regulated brine line. Implementation of Phase III construction of a regulated brine line is highly dependent on obtaining the necessary public funding.

For NPDES dischargers, which are subject to federal regulatory requirements, CV-SALTS recommends that as NPDES permits are renewed on their normal five-year cycle, that the Central Valley Water Board consider approval of a salinity variance per the Salinity Variance Policy, which would include a requirement to participate in the Prioritization and Optimization Study in order to receive the variance for meeting applicable surface WQOs for salinity. Or, in the alternative, the Central Valley Water Board could consider a NPDES watershed-based permit for salinity, as it deems appropriate.

The SNMP and CV-SALTS BPA propose new policies for the regulation of salt and nitrate and a suite of secondary MCL parameters. Parameters of interest under these new policies include the following:

- Electrical conductivity (EC), and total dissolved solids (TDS)
- Nitrates
- Chloride
- Sulfate
- Aluminum
- Color
- Copper
- Foaming Agents
- Iron
- Manganese
- Methyl-tert-butyl ether

- Odor-Threshold
- Silver
- Thiobencarb
- Turbidity
- Zinc

The SNMP (Central Valley Salt and Nitrate Management Plan Economic Analysis, October 2016) proposes to establish a 50-year, half a century, timeframe for achieving balance and restoration.

The proposed SNMP allows for continued water quality degradation and mixing zones. Therefore, an Antidegradation Analysis is required. CWC Sections 13146 and 13247 require that the Board in carrying out activities which affect water quality shall comply with state policy for water quality control unless otherwise directed by statute, in which case they shall indicate to the State Board in writing their authority for not complying with such policy. The State Board has adopted the Antidegradation Policy (Resolution 68-16), which the Regional Board has incorporated into its Basin Plan. The Regional Board is required by the CWC to comply with the Antidegradation Policy.

Section 101(a) of the Clean Water Act (CWA), the basis for the antidegradation policy, states that the objective of the Act is to "restore and maintain the chemical, biological and physical integrity of the nation's waters." Section 303(d)(4) of the CWA carries this further, referring explicitly to the need for states to satisfy the antidegradation regulations at 40 CFR § 131.12 before taking action to lower water quality. These regulations (40 CFR § 131.12(a)) describe the federal antidegradation policy and dictate that states must adopt both a policy at least as stringent as the federal policy as well as implementing procedures.

California's antidegradation policy is composed of both the federal antidegradation policy and the State Board's Resolution 68-16 (State Water Resources Control Board, Water Quality Order 86-17, p. 20 (1986) ("Order 86-17); Memorandum from Chief Counsel William Attwater, SWRCB to Regional Board Executive Officers, "federal Antidegradation Policy," pp. 2, 18 (Oct. 7, 1987) ("State Antidegradation Guidance")). As a state policy, with inclusion in the Water Quality Control Plan (Basin Plan), the antidegradation policy is binding on all of the Regional Boards (Water Quality Order 86-17, pp. 17-18).

Implementation of the state's antidegradation policy is guided by the State Antidegradation Guidance, SWRCB Administrative Procedures Update 90-004, 2 July 1990 ("APU 90-004") and USEPA Region IX, "Guidance on Implementing the Antidegradation Provisions of 40 CFR 131.12" (3 June 1987) ("Region IX Guidance"), as well as Water Quality Order 86-17.

The Regional Board must apply the antidegradation policy whenever it takes an action that will lower water quality (State Antidegradation Guidance, pp. 3, 5, 18, and Region IX Guidance, p. 1). Both the state and federal policies apply to point and nonpoint source pollution (State Antidegradation Guidance p. 6, Region IX Guidance, p. 4).

Tier 1 protections apply even to those waters already impacted by pollution and identified as impaired. In other words, already impaired waters cannot be further impaired.

Tier 2 waters are provided additional protections against unnecessary degradation in places where the levels of water quality are better than necessary to support existing uses. Tier 2 protections strictly prohibit degradation unless the state finds that a degrading activity is: 1) necessary to accommodate important economic or social development in the area, 2) water quality is adequate to protect and maintain existing beneficial uses and 3) the highest statutory and regulatory requirements and best management practices for pollution control are achieved (40 CFR § 131.12(a) (2)). Cost savings to a discharger alone, absent a demonstration by the project proponent as to how these savings are "necessary to accommodate important economic or social development in the area," are not adequate justification for allowing reductions in water quality (Water Quality Order 86-17, p. 22; State Antidegradation Guidance, p. 13).

The State Board's APU 90-004 specifies guidance to the Regional Boards for implementing the state and federal antidegradation policies and guidance. The guidance establishes a two-tiered process for addressing these policies and sets forth two levels of analysis: a simple analysis and a complete analysis. A simple analysis may be employed where a Regional Board determines that: 1) a reduction in water quality will be spatially localized or limited with respect to the waterbody, e.g. confined to the mixing zone; 2) a reduction in water quality is temporally limited; 3) a proposed action will produce minor effects which will not result in a significant reduction of water quality; and 4) a proposed activity has been approved in a General Plan and has been adequately subjected to the environmental and economic analysis required in an EIR. A complete antidegradation analysis is required if discharges would result in: 1) a substantial increase in mass emissions of a constituent; or 2) significant mortality, growth impairment, or reproductive impairment of resident species.

Even a minimal antidegradation analysis would require an examination of: 1) existing applicable water quality standards; 2) ambient conditions in receiving waters compared to standards; 3) incremental changes in constituent loading, both concentration and mass; 4) treatability; 5) best practicable treatment and control (BPTC); 6) comparison of the proposed increased loadings relative to other sources; and 7) an assessment of the significance of changes in ambient water quality. A minimal antidegradation analysis must also analyze whether: 1) such degradation is consistent with the maximum benefit to the people of the state; 2) the activity is necessary to accommodate important economic or social development in the area; 3) the highest statutory and regulatory requirements and best management practices for pollution control are achieved; and 4) resulting water quality is adequate to protect and maintain existing beneficial uses. A BPTC technology analysis must be done on an individual constituent basis.

The antidegradation review process is especially important in the context of waters protected by Tier 2. See EPA, Office of Water Quality Regulations and Standards, *Water Quality Standards Handbook*, 2nd ed. Chapter 4 (2nd ed. Aug. 1994). Whenever a person proposes an activity that may degrade a water protected by Tier 2, the antidegradation regulation requires a state to: (1) determine whether the degradation is "necessary to accommodate important economic or social development in the area in which the waters are located"; (2) consider less-degrading alternatives; (3) ensure that the best available pollution control measures are used to limit

degradation; and (4) guarantee that, if water quality is lowered, existing uses will be fully protected. 40 CFR § 131.12(a)(2); EPA, Office of Water Quality Regulations and Standards, Water Quality Standards Handbook, 2nd ed. 4-1, 4-7 (2nd ed. Aug. 1994). These activity-specific determinations necessarily require that each activity be considered individually.

For example, the APU 90-004 states:

> "Factors that should be considered when determining whether the discharge is necessary to accommodate social or economic development and is consistent with maximum public benefit include: a) past, present, and probably beneficial uses of the water, b) economic and social costs, tangible and intangible, of the proposed discharge compared to benefits. The economic impacts to be considered are those incurred in order to maintain existing water quality. The financial impact analysis should focus on the ability of the facility to pay for the necessary treatment. The ability to pay depends on the facility's source of funds. In addition to demonstrating a financial impact on the publicly – or privately – owned facility, the analysis must show a significant adverse impact on the community. The long-term and short-term socioeconomic impacts of maintaining existing water quality must be considered. Examples of social and economic parameters that could be affected are employment, housing, community services, income, tax revenues and land value. To accurately assess the impact of the proposed project, the projected baseline socioeconomic profile of the affected community without the project should be compared to the projected profile with the project…EPA's Water Quality Standards Handbook (Chapter 5) provides additional guidance in assessing financial and socioeconomic impacts"

CSPA's specific comments:

1. The SNMP provides that each project undertaken under the Policy will be required to undertake its own Antidegradation Policy analysis and that the Policy itself does not lower water quality. The Antidegradation Policy requirements are applicable to the SNMP policy as the Regional Board in adopting the Policy is taking an action that will result in lowering water quality. Wastewater Dischargers could not implement the SNMP recommendations if the Policy is not adopted by the Regional Board. It is disingenuous to conclude that an Antidegradation Analysis is being presented in the SNMP when the real conclusion is that such analyses will be provided by individual Dischargers at a much later date.

   The Regional Board must show that best practicable treatment and control (BPTC) is being required and provided by the Dischargers.

   The SNMP does not contain an analysis of treatment technologies for treating nitrates or salts to determine BPTC or an assessment of wastewater dischargers and what technologies are being applied to treat these constituents to acceptable levels. It appears that there is little, if any, treatment for nitrates other than at domestic wastewater treatment plants. For salinity, it appears that the only treatment being applied is by Industrial facilities to protect their processes from highly saline supply water. There is no assessment of the application of

BPTC for the vast majority of wastewater dischargers. The SNMP does not assess BPTC and does not, therefore, comply with the requirements of the Antidegradation Policy.

2. The proposed SNMP does not meet the Antidegradation Policy requirement that BPTC of the discharge be applied. The SNMP allows an extended period of time for wastewater dischargers study, plan and potentially implement measures to control pollutants. There is no requirement that BPTC of the discharge be implemented. For example, treatment and control methods for nitrate are readily available currently. The SNMP Antidegradation Policy, dated December 2016, on page 96, confirms that the recommended alternative does not require application of BPTC:

   **"*No Path B Permitting Option*–*This option is more restrictive than the Proposed Policy Option because it either requires dischargers to demonstrate compliance with the necessary findings of the State Antidegradation Policy in the short term, including implementation of Best Practical Treatment or Control to ensure that pollution or nuisance will not occur, or, if an Exception is granted, the discharger is still required to implement Best Practical Treatment or Control and mitigate any impacts that would otherwise cause pollution or nuisance. Thus, this option provides further protection for ensuring that WDRs assure that pollution or nuisance will not occur, and that the highest level of water quality consistent with the maximum benefit to the people of the state will be maintained*." (Emphasis added)

   The Regional Board could delay application of BPTC for Dischargers for decades while studies and application of the SNMP provisions are implemented, assuming they are found to be "reasonable and feasible". It appears that if a project is not found to be "reasonable and feasible" BPTC of a wastewater discharge may never be required, clearly a violation of the Antidegradation Policy.

3. The first stated goal of the SNMP is to ensure a safe drinking water supply. The proposed SNMP provides that bottled water would be provided to communities where the nitrate levels exceed the primary drinking water standard. The Basin Plan designation is for "Municipal and Domestic Supply" which encompasses water for community water supply systems not limited to drinking water supply.

   The Antidegradation Policy requires that any action to lower water quality be in the best interest of the people of California. Supplying bottled water does not address the many uses of water in a community beyond drinking water. Allowing continued and increased degradation of the drinking water supply will have numerous impacts throughout a community that are clearly in the best interest of the people of California.

   The financial impact of allowing continued and increased degradation of the drinking water supply must be assessed for the baseline (current) costs to residential, commercial and industrial users of water as well as the projected increased costs due to the proposed short term and long term degradation of water quality.

   Domestic uses of water, in addition to drinking, may be significantly impacted by high levels

of salt. A report, (*Central Arizona Salinity Study, Phase I Report, December 2003*) documents the impacts to domestic and community uses of high salinity water as:

- Residential uses; For example, clothes washed in hard water often look dingy and feel harsh and scratchy. Clothes continuously washed in hard water can have a shortened lifespan of up to 40 percent (Maunders, 2003). Similarly, bathing with soap in hard water leaves a film of sticky soap curd on the skin that can prevent removal of soil and bacteria. Soap curd in the hair may make it dull, lifeless and difficult to manage. Hard water contributes to inefficient and costly operation of water-using home appliances. Heated hard water forms a scale of calcium and magnesium minerals (limescale deposits) that can lead to shortened life of water heaters. Evaporative coolers will be coated with limescale deposits as the water is evaporated and the minerals remain behind, which requires more frequent replacement and higher maintenance costs. Solar heating units also are prone to limescale buildup and thus early replacement. Pipes can become clogged with scale that reduces water flow and ultimately requires pipe replacement.

- Commercial uses; Large commercial buildings commonly utilize cooling towers to provide air conditioning. Cooling towers operate by evaporating water using the same principle as evaporative coolers for individual homes, but employ a more sophisticated process in which the cooled water is passed through a heat exchanger to cool the air. As water evaporates it leaves behind salts, which inevitably accumulate in the remaining water. After a few cycles, depending on the source water salinity and other factors, the water has to be discharged or the salts will precipitate out or scale on the copper tubing of the heat exchanger or the tower itself, reducing the efficiency of the system. Several problems arise because of high TDS source water in a cooling tower. For example, if the salt-enhanced water is discharged to the sewer it raises the TDS of the effluent at the wastewater treatment plant. A second problem relates to the cycling of water through cooling towers. High TDS water can be used through fewer cycles of concentration before that water is discharged and fresh water or makeup water must be brought into the tower. The use of make-up water has an associated cost.

  Golf Courses - high TDS water limits the ability of certain species of turf grasses to grow and flourish. Salt buildup in the root zone is endemic and must be flushed with additional water. High-TDS water stains those facilities that receive any overspray. High sodium also causes clay soils to disperse, resulting in a relatively impermeable layer and poor subsequent infiltration and high nitrates levels cause problems with the greens. With aggressive maintenance regimens, golf course managers have been able to maintain the greens and fairways but at a substantial increase in cost for chemicals and labor.

- Industrial/Manufacturing; Cooling towers used in the industrial sector are usually larger and more robust than the commercial sector cooling towers, but have the same problems as commercial cooling towers. Other industries impacted by high salinity supply water include high-tech manufacturing of chips, computer parts, cell phones, LCD crystals, and other retail consumer goods such as food and beverage production. Many of these industries have already installed reverse osmosis systems to provide the necessary lower salinity water for their operations. Increased salinity levels would only increase the need

for additional water supply treatment.

Bottled water may address drinking water, but not the other uses associated with a municipal water supply system. The Central Valley Salt and Nitrate Management Plan (October 2016), Economic Analysis, page 90, states that id salinity is not controlled the total of all direct losses across all three central valley basins ranges from $988 million to $1.543 billion for the year 2030 depending on the salinity scenario (Howitt et al., 2009). The baseline economic impacts of the existing degradation from salts and nitrates was not presented. It must be noted that the year 2030 is only 13 years from the current date – the SNMP proposes up to 50 years to achieve water quality goals, assuming it is reasonable and feasible. There is nothing in the SNMP that would indicate that the projected economic losses for 2030 would not be realized. Such economic losses are not in the best interest of the people of California and therefore the SNMP does not comply with the Antidegradation Policy requirements in allowing degradation to water quality.

4. The Salinity Management Strategy (SNMP Attachment A-3) involves a phased approach of study and implementation to control salt accumulation in the Central Valley. Phase I consists of developing a Prioritization and Optimization Study to further define the conceptual design of SSALTS into a feasibility study that identifies appropriate regional and sub-regional projects, including location, routing and implementation/operation of specific projects. Completion of the study is anticipated to take approximately 10-years, though the strategy recommends that the Executive Officer of the Central Valley Water Board be given the direct authority to extend this time frame if compelling reasons or adequate justification is provided for an extension. Once the Prioritization and Optimization Study is completed, Phase II of the Salinity Management Plan will be implemented. Implementation of Phase II, in whole or part, will occur as indicated in the Prioritization and Optimization Study, and after approval of any necessary Basin Plan amendments. Phase II will generally consist of environmental permitting, obtaining funding, and engineering and design, which are anticipated to take approximately 10 years. Phase III would consist of actual construction of the physical projects identified in the Prioritization and Optimization Study, in particular a regulated brine line. Implementation of Phase III construction of a regulated brine line is highly dependent on obtaining the necessary public funding.

   Salt accumulations in California's Central Valley groundwater are principally due to irrigated agricultural practices. In the Central Valley, the majority of agricultural land is owned and operated by corporations, not family farms. Under the Regional Board's current regulatory efforts, to date, 1.5 million acres of irrigated land have been identified as salinity impaired, and a quarter million acres have been taken out of production. (SNMP Attachment A-3, page A3-1). The Regional Board has applied the most sensitive Beneficial Uses as agriculture and drinking water, but does not assess the potentially more sensitive use of Industrial Supply. The Regional Board also establishes Interim Limitations for salinity based on the existing water quality rather than requiring immediate compliance with water quality based limitations. The Regional Board's CV-SALTS program recommends that entities beyond dischargers that also benefit from salinity management in the Central Valley participate in funding the Priority and Optimization Study as well as implementation of Phases II and III as applicable. However, as shown above the SNMP Salinity Management Strategy

recommends that it is necessary that taxpayers pay for a brine line. This section and the Antidegradation Analysis is, however, silent with regard to any economic analysis or justification why a brine line cannot be paid for by the Polluters that caused the problem. The Antidegradation Analysis is incomplete and contains an incomplete economic analysis. The Antidegradation Analysis clearly does not meet the requirement to show that it is in the best interest of the people of California to pay for the solution to a condition of pollution caused by wastewater Dischargers.

5. As is stated above, the SNMP and CV-SALTS BPA proposes new policies for the regulation of salt and nitrate and a suite of secondary MCL parameters. Parameters of interest under these new policies include the following:

   - Electrical conductivity (EC), and total dissolved solids (TDS)
   - Nitrates
   - Chloride
   - Sulfate
   - Aluminum
   - Color
   - Copper
   - Foaming Agents
   - Iron
   - Manganese
   - Methyl-tert-butyl ether
   - Odor-Threshold
   - Silver
   - Thiobencarb
   - Turbidity
   - Zinc

   The SNMP does not acknowledge that the Basin Plan, Water Quality Objectives for Ground Waters, include a narrative toxicity objective. The ground water toxicity water quality objective would be specifically applicable to aluminum, copper, silver and zinc and would be significantly more restrictive than a secondary drinking water standard.

   The SNMP also fails to acknowledge that there is frequently hydraulic continuity between ground water and surface waters, such as gaining streams, springs and artesian conditions. Application of relaxed standards or the use of assimilative capacity in ground water may significantly impact surface water.

6. The SNMP, Antidegradation Analysis, page 95 states that:

   "*The Nitrate Permitting Strategy differs from the Board's current permitting approach in that it would allow the Board to consider the "practicability" of the actions of the dischargers participating in Alternative Compliance Projects or Management Zones, rather than the practicability of individual treatment or control methodologies on a case-*

by-case basis. In other words, if the Board was considering WDRs for two individual facilities on a permit-by-permit basis, it would need to evaluate whether each individual facility was implementing pollution or control methods that were "best practicable treatment or control" based on the financial and technical capacities of each of the facilities on its own. Under the traditional permitting approach, if the two facilities found that it might be practicable for them to collectively finance a pollution treatment methodology that would reduce pollutant loadings to a greater degree than each could individually afford on their own, there would still be some ambiguity as to whether the Board could consider this alternative the "best practicable treatment or control" alternative."

This statement is simply incorrect. If several dairy owners get together and start a cheese making plant, it is the cheese factory that would get a discharge permit for any wastewater discharge, not the individual dairies. The same holds true for wastewater treatment facilities. If several wastewater generators develop a regional wastewater treatment plant, it is the regional wastewater treatment plant that conducts an Antidegradation Policy analyses and get a waste discharge permit.

7. Throughout the SNMP documents conclusory unsupported statements are repeated. SNMP, Environmental Review and Economic Analysis, Section 6, states in part that:

"*Where dischargers would be able to comply with existing regulatory thresholds, implementation of the No Project Alternative would lessen some of the potentially significant impacts in areas of groundwater basins/subbasins where salt and nitrate levels are currently approaching or exceeding applicable water quality objectives. However, given the complexity and expense associated with implementing corrective actions, compliance would only be achieved over a number of years. Furthermore, widespread deployment of the advanced treatment technologies necessary to meet existing regulatory thresholds would result in extraordinary secondary impacts (additional greenhouse gas emissions from reverse osmosis treatment, the creation of new waste streams, etc.). Where dischargers are unable to implement treatment or control technologies to come into compliance with existing regulatory thresholds, dischargers would be forced to discontinue commercial activities. While the discontinuation of commercial activities, such as the fallowing of agricultural lands or the abandonment of livestock operations, might reduce current pollutant loading, it would not itself rectify groundwater impairments, as significant masses of nitrates and other salts currently exist in vadose zones throughout the Central Valley, and would continue to migrate to groundwater following the cessation of economic activities. Furthermore, the extensive discontinuation of commercial activities would result in significant and widespread negative economic impacts. Water quality degradation is therefore inevitable under the No Projective Alternative both where dischargers have the technical and economic capacity to come into compliance with existing regulatory thresholds and where dischargers would be forced to discontinue commercial activities. Under both scenarios, the continued degradation would be considered a potentially significant impact. Lastly, while the No Project Alternative may somewhat lessen the potentially significant water quality impacts from salt and nitrate water quality*

degradation impacts identified for the Preferred Alternative, it is not expected to reduce these impacts to a less-than-significant level."

The Economic Analysis tends to default to a statement that individual treatment costs for compliance cannot be assessed and would have to be assessed by the individual dischargers. The SNMP does not present projected cost for compliance to individual wastewater Dischargers for salts and nitrates and also does not present any assessment of the time required to achieve compliance.

The SNMP fails to discuss the fact that numerous industries are currently forced to use reverse osmosis to treat their supply water. The SNMP is insufficient in its assessment of current costs of noncompliance with salt and nitrate water quality standards and the impacts of additional and continued degradation of water quality. The SNMP does not assess greenhouse gases related to current industrial uses due to polluted or degraded water supplies to industrial processes that must have a clean water supply. There is no supporting documentation in the SNMP for the conclusory statement regarding greenhouse gas generation or the potential use of green and renewable energy sources.

There is no information and documentation to support the conclusory statements that there would be "extensive discontinuation of commercial activities" or that "extensive discontinuation of commercial activities would result in significant and widespread negative economic impacts".

There is no discussion as to why long term solutions, such as the discussed brine line, could not be undertaken while regulating individual dischargers without including the SNMP Phase 1 and Phase 2 continued allowances for additional degradation and the extensive compliance time allowances.

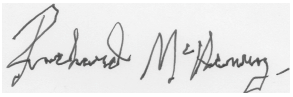
8. The SNMP Antidegradation Analysis is deficient in almost every regard. The analysis fails to;

    a. assess the allowance for additional degradation for pollutants with regard to incremental changes in constituent loading, both concentration and mass,
    b. discuss the treatability for nitrate and readily available and widely used technologies,
    c. best practicable treatment and control (BPTC) for each constituent that would be affected by the proposed SNMP policy,
    d. comparison of the proposed increased loadings relative to the various identified sources
    e. an assessment of the significance of changes in ambient water quality with adoption of the SNMP (the SNMP allows for groundwater cleanup and restoration only if it is "reasonable and feasible", what constitutes "reasonable and feasible" and what are the expectations and projections of the percent of polluted and degraded groundwater where it will be "reasonable and feasible" to restore groundwater quality?
    f. an assessment of the costs to achieve compliance for dischargers both with and without adoption of the SNMP

Thank you for considering these comments. If you have questions or require clarification, please don't hesitate to contact us.

Sincerely,

Bill Jennings, Executive Director
California Sportfishing Protection Alliance



Richard McHenry, Director of Permits & Compliance
California Sportfishing Protection Alliance